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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,928	11/13/2003	Naohiko Tsuzuki	F-8041	9881

28107 7590 04/26/2005

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EXAMINER	
KERNS, KEVIN P	

ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,928	TSUZUKI ET AL.	
	Examiner	Art Unit	
	Kevin P. Kerns	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2003 and 03 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Aoki (US 4,044,653) or Nakamura et al. (US 5,443,782) in view of Jacobsen et al. (US 6,502,620).

Aoki discloses a hydraulic control apparatus for injection molding or die casting, in which the apparatus includes an injection cylinder 1 for injection of molten material into a mold cavity; a motor-driven hydraulic pump P; a hydraulic circuit that includes a series of solenoid valves to control pressure to the hydraulic fluid pipelines; and a

hydraulic controller in the form of an electrical relay and timer circuit, or a combination of circuit and limit switches, being operative to control a discharge rate of the hydraulic pump (abstract; column 1, lines 11-18; column 2, lines 5-62; column 3, lines 11-68; column 4, lines 1-14; and Figures 1-4).

Nakamura et al. disclose a method and apparatus for injection molding, or die casting, in which the apparatus includes an injection cylinder 1 for injection of molten material into a mold cavity; a motor-driven hydraulic pump PV; a hydraulic circuit that includes a series of shifting valves to control pressure to the hydraulic fluid pipelines; and a hydraulic controller operative to control a discharge rate of the hydraulic pump (abstract; column 1, lines 9-18; column 2, lines 29-68; column 3, lines 1-27; column 4, lines 1-68; column 5, lines 1-68; column 6, lines 1-48; and Figures 1 and 2).

Neither Aoki nor Nakamura et al. discloses one or more two-way hydraulic pumps.

However, Jacobsen et al. disclose a method of controlling a hydraulic system in a molding apparatus, in which the hydraulic system includes first and second variable displacement hydraulic pumps (30,31) that are double-sided (two-way), in addition to a servo pump 35 that delivers hydraulic fluid from a reservoir 36 to the pumps (30,31) via motor 34, such that the double-sided pumps are advantageous for delivering and receiving fluid in two directions, thus allowing the pumps to be connected in a closed circuit and to have braking energy returned to the pump, achieving better positional control (abstract; column 2, lines 22-55; column 4, lines 63-67; column 5, lines 1-67; column 6, lines 1-15; and Figure 3).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify either of the die casting machines disclosed by Aoki or Nakamura et al., by using the hydraulic system that includes first and second variable displacement double-sided (two-way) hydraulic pumps, as taught by Jacobsen et al., in order to deliver and receive fluid in two directions, thus allowing the pumps to be connected in a closed circuit and to have braking energy returned to the pump, achieving better positional control (Jacobsen et al.; column 2, lines 31-40; column 4, lines 63-67; and column 5, lines 1-12).

Response to Arguments

4. The examiner acknowledges the applicants' amendment and replacement drawing sheet (Figure 3) received by the USPTO on March 3, 2005. The drawing sheet and amendment overcome prior objections to the drawings and specification, respectively. Claims 1-8 remain under consideration in the application.

5. Applicants' arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571)

272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns Kevin Kerns 4/20/05
Primary Examiner
Art Unit 1725

KPK
kpk
April 20, 2005